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- (71) **Applicants:** **AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 1 Fusionopolis Way, #20-10 Connexis, Singapore 138632 (SG). **SINGAPORE HEALTH SERVICES PTE LTD** [SG/SG]; 31 Third Hospital Avenue, #03-03 Bowyer Block, Singapore 168753 (SG).
- (72) **Inventors:** **NG, Ee Sin**; c/o PKM, Institute of Infocomm Research, 1 Fusionopolis Way #21-01, Connexis South Tower, Singapore 138632 (SG). **ENG, How Lung**; c/o PKM, Institute of Infocomm Research, 1 Fusionopolis Way #21-01, Connexis South Tower, Singapore 138632 (SG). **CHAN, We Shih Derrick**; c/o PKM, Institute of Infocomm Research, 1 Fusionopolis Way #21-01, Connexis South Tower, Singapore 138632 (SG). **HTWE, That**

Mon; c/o PKM, Institute of Infocomm Research, 1 Fusionopolis Way #21-01, Connexis South Tower, Singapore 138632 (SG). **DARSONO, Wiriyanto**; c/o PKM, Institute of Infocomm Research, 1 Fusionopolis Way #21-01, Connexis South Tower, Singapore 138632 (SG).

(74) **Agent:** **VIERING, JENTSCHURA & PARTNER LLP**; P.O. Box 1088, Rochor Post Office, Rochor Road, Singapore 911833 (SG).

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(54) **Title:** HYPERMOTOR ACTIVITY DETECTION SYSTEM AND METHOD THEREFROM

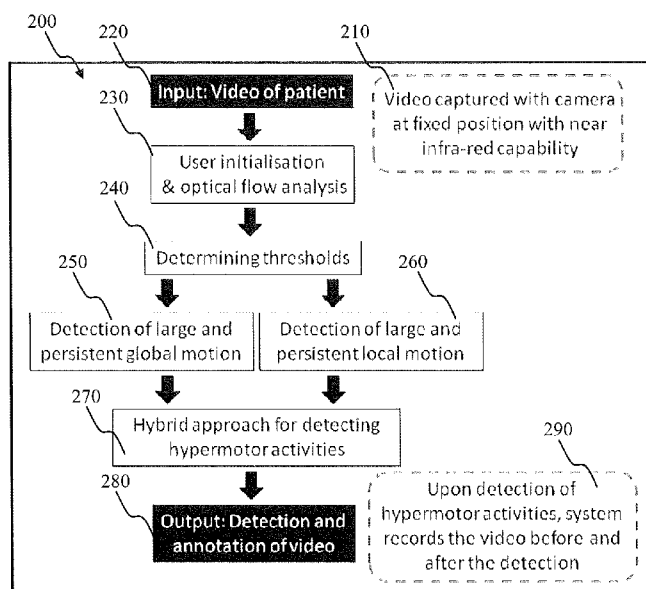


FIG. 2

(57) **Abstract:** According to various embodiments of the present disclosure, there is provided a hypermotor activity detection system, including: a video capture device configured to monitor a patient and obtain a video input; and a processing system configured to process the video input, including: an optical flow module configured to carry out an optical flow analysis on a video input region determined from the video input, and further determine a flow field magnitude of the video input region; a local motion reference module including: a division module configured to divide the video input region into a plurality of sub-windows; a sub-window flow module configured to determine a sub-window flow field magnitude for each of the plurality of sub-windows; a local motion magnitude module configured to obtain a magnitude of local motion based on the sub-window flow field magnitude for each of the plurality of sub-windows; and a local motion comparison module configured to compare the magnitude of local motion with a local motion threshold for a predetermined number of observation frames to obtain a local motion reference value. Further, a corresponding method for detecting hypermotor activity is provided.

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